

REMARKS

Claims 2 and 5 are canceled. Claims 6-14 are withdrawn from consideration. No claims are amended herein. Accordingly, claims 1, 3, 4 and 15 are all of the claims pending before the Examiner for examination.

I. Response to Claim Rejections under 35 U.S.C. § 103

In paragraph 4 of the Action, claims 1, 3 and 15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sigai (US '124) and Bechtel (US '047) in view of each other.

In paragraph 5 of the Action, claims 1, 3-4 and 15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kasenga et al (US '707) in view of Mizuta et al (US '654) and Bechtel (US '047).

Applicants respectfully traverse the rejections and submit that the cited references, whether taken alone or in combination, do not teach or suggest the claimed invention as a whole for the following reasons.

A. The Present Invention

The present invention provides a process for producing a vacuum ultraviolet ray-excited light-emitting phosphor as recited in claim 1.

In the process of the present invention, one of the raw materials is an aluminate phosphor compound and another is a coupling agent containing a 1,3-diketone structure.

According to the process of the present invention, a vacuum ultraviolet ray-excited light-emitting phosphor having an excellent life property of maintaining light-emitting brilliance over time is obtained (see page 8, lines 21-25 of the present specification and Example 1).

B. Disclosure of the References

1. Sigai (US '124) in view of Bechtel (US '047)

The Examiner acknowledges that US '124 does not teach the use of aluminate phosphors and that US '047 does not teach aluminum oxide coatings.

The Examiner argues that taking the references as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method of US '124 to coat the aluminate phosphors of US '047 because US '047 teaches that the aluminate phosphors benefit from coatings that increase their lifetime, and US '124 teaches coatings that extend phosphor lifetime by protecting the phosphors from moisture".

However, US '147 discloses coatings that comprise catena-polyphosphates of metals selected from the group consisting of alkaline earth metals, zinc, cadmium and manganese. See, e.g., claim 1 of the reference. Therefore, US '047 teaches coatings that are made of compounds of alkaline earth metals, zinc, cadmium and manganese and not other metals such as aluminum as in the present invention. In other words, US '047 teaches away from metal compounds other than zinc, cadmium and manganese. Accordingly, there is no motivation to combine the references as suggested by the Examiner. Further, even if the references were combined, the present invention would not have been achieved since neither of the cited references teaches coatings made of aluminum compounds as in the present invention. Thus, the Examiner has not established a *prima facie* showing of obviousness with respect to claim 1. Claims 3, 4 and 15 depend from claim 1 and are distinguished over the art for at least the same reasons.

Accordingly Applicants respectfully request withdrawal of the rejection.

2. Kasenga (US '707) in view of Mizuta ('654) and Bechtel ('047)

The Examiner acknowledges that US '707 and US '654 do not specifically teach methods for coating aluminate phosphors.

As discussed above, US '047 teaches away from a metal compound other than alkaline earth metals, zinc, cadmium and manganese, as coatings. Therefore, there is no motivation to combine US '707 or US '654 with US '124 with a reasonable expectation of achieving the claimed invention. Even if the references were combined the claimed invention would not have been achieved since neither of the cited references teaches coatings made of aluminum compounds as in the present invention.

Thus, the Examiner has not established a *prima facie* showing of obviousness with respect to claim 1. Claims 3, 4 and 15 depend from claim 1 and are distinguished over the art for at least the same reasons.

Accordingly, Applicants respectfully request withdrawal of the rejection.

II. Conclusion

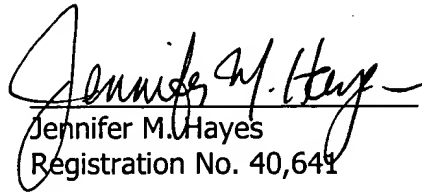
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. 1.111
U.S. APPLN. NO. 09/810,225

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Jennifer M. Hayes
Registration No. 40,641

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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